UNIVERSITY OF CAMBRIDGE INTERNATIONAL EXAMINATIONS

GCE Ordinary Level

MARK SCHEME for the June 2005 question paper

2059 PAKISTAN STUDIES

2059/02 Paper 2 (The Environment of Pakistan), maximum mark 75

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June 2005

GCE O LEVEL

MARK SCHEME

MAXIMUM MARK: 75

SYLLABUS/COMPONENT: 2059/02

PAKISTAN STUDIES
The Environment of Pakistan

1 (a) (i) Name the city A
Karachi **[1]**

(ii) Name the line of latitude B
Tropic of Cancer/23½˚ N

(iii) Name the river C
Dasht **[1]**

(iv) Name the area D
Indus delta/Thatta district **[1]**

(v) Name the province E
Balochistan **[1]**

(b) (i) What type of forest grows in the area F on Fig. 1?
Mangrove **[1]**

(ii) Why is this type of forest only found in this area?
Saline soil/salt water in soil
Tidal regular flooding
Trees are adapted to this environment/have aerating roots/roots filter salt/salt secreted **[2]**

(iii) The area of this forest has decreased in size in recent years. How and why has this affected the local fisheries?

How (Res 1)
Fewer fish

Why (Res 1)
Roots provide shelter for young fish
Less food
Breeding ground 2 @ 1 **[2]**

(c) The Kaghan Valley and others in the Himalaya Mountains attract international and domestic tourists.

(i) Explain why tourists visit these valleys.
Views of mountain peaks, snow, waterfalls, etc.
Forests/orchards
Fishing in River Kunhar
Saiful Maluk Lake
Jeep rides
Walking/hiking/climbing/mountaineering/picnics
Unique area/nothing like it anywhere else
Polo
Flora/fauna
Cooler climate than plains
Traditional crafts/customs/lifestyle/cottage industries
etc. **[3]**

(ii) Explain with reference to <u>two</u> examples, why tourists visit cultural [illegible] in Pakistan.

Examples
Credit any two examples of **cultural** tourist attractions (res 2) and (max 2)

Archaeological sites
Moen-jo-darn, Harappa, Taxila,
Kashmir Smats (caves) in NWFP
etc.

Historic and religious sites
Forts (Baltit), Lahore
Mosques (Badshabi, Muhabat),
Tombs (Chaukandi, Makli, Allarma Iqbal, Ranjit Singh),
Shrines (Uch Sharif)
Khyber Pass,
Shalimar Gardens,
Kalash Valley
Swat area
etc.

Modern buildings
Faisal mosque, Parliament building, Presidential palace,
Jinnah mausoleum, Minar-Pakistan,
NOT dams, reservoirs etc.
Named/Located example of traditional culture
Swat, Gilgit, Kalash, Kaghan valleys
Named/Located Festival
Basant panchmi – kite flying at Lahore
Mela chiragan – festival of lamps beside Shalimar gardens
Named/Located Bazaar or Market
Anaskali,Chitral, Swat, Kalash, etc.

Why they visit
Historic interest
Museum
Religious faith
Education
Different culture to their own

Candidates can gain 2 marks without examples. **[4]**

(d) **Explain the advantages of developing tourist attractions in Pakistan**

Foreign exchange/currency
Reduced debt
Reduced trade deficit/improved balance of payments
More jobs + development
Higher incomes to locals + dev
Better local economy/demand for more services
Better facilities, infrastructure, services, communications for locals
(up to **2 marks**)
Better cultural understanding
Sustainable industry/will not run out like coal
Reduces rural-urban migration
Cultural/historic sites restored/maintained **[4]**

(e) **Why is capital important in the development of tourism?**

Building and maintenance of shops, hotels, etc.
Security
Travel facilities/roads/jeeps/buses, etc.
Provision of **named** infrastructure
Professional management
Marketing and publicity/advertising
etc. **[4]**

2 (a) (i) Compare the amount, and seasonal distribution of rainfall at Quetta and Lahore.

Q winter max, L summer max
Q max December to March/February, L max July to August/August
Q second wet month July, L second wet season January to March
Q lower total than L/L higher total than Q
Q more in December than L
Equal in March and/or November
L rain in all months, Q no rain in June and September
L more than Q April – October/April - June
L higher maximum than Q

Must compare both charts for credit
res. 1 for comparison of amounts
res.1 for comparison of seasonal dist. **[4]**

(ii) Give reasons for the differences in amount and seasonal distribution of rainfall at these locations. [6]

QUETTA
More rain from winter depressions [Max 2]
Summer convectional rainfall [Max 2]
No/negligible monsoon rainfall

LAHORE
Less rain from winter depressions
Little convectional rainfall/low humidity
Monsoon winds – this should include both the SE and NW monsoon [Max 4 marks]
Comparison of locations (1 mark)
Monsoon brings more rain than depressions (1 mark)
Must refer to **differences** (in each type of rainfall)

(b) (i) Compare the mean monthly temperatures of Quetta and Lahore

Both graphs have a similar range/both 20-22˚
Q colder/L warmer
Q smooth curve, L sharp drop after June
Q slight drop May to July, L increases then decreases

Must compare **both** charts for credit **[3]**

(ii) Explain the seasonal changes in temperature at Lahore.

Effect of latitude/angle of the suns rays [Max 2]
Rising in dry season/lack of cloud cover before monsoon
Drop in July related to start of monsoon season/heavy rainfall/stratus cloud [Max 2] **[3]**

(c) (i) What are the benefits and problems for farmers in the area of ... ich result from the rainfall?

Benefits [Res.1]
Some rain in all months/throughout year
Enough without irrigation/ for barani farming
Monsoon rain/summer rain for Kharif crops
Depression and convectional rain/winter rain for Rabi crops

Problems [Res.1]
Uneven distribution
Too much in July – August/too little October/November
Flooding in wet season
Lack of sunshine for ripening crops
Drought/high evapotranspiration April – June
Early or late arrival of monsoon
Heavy rain damages cereals, cotton
Pests, disease, virus in wet season
Heavy rain ineffective/does not soak in
[Float 3] **[5]**

(ii) Choose <u>one</u> of the problems from (c)(i) and explain how it can be reduced.

Uneven distribution/too little in some months
Storage in reservoirs, ponds, tanks, barrages
Canals from storage in mountains
Use of underground supplies in dry season, tubewells

Flooding/too much in some months
Dams (in catchment areas), reservoirs, barrages
River embankments/levees
Drainage systems/diversion canals
Afforestation in catchment area
Dredging canals
Weather forecasts

Any other **reasonable** problems [Max. 3 any one line]
N.B. Allow a problem not stated in **(c)(i)**
Credit only **one problem** **[4]**

3 (a) (i) How many million acres of wheat were grown in 2000?
23.5/23 - 24 **[1]**

(ii) For which crop was there a reduction in area from 1990 to 2000?
Vegetables

(iii) For which crop was there an increase in area from 1980 to 2000 by 2 million acres?
Cotton **[1]**

(b) (i) Why is an increase in wheat production important?
Increasing population
Alleviate starvation/lack of food
Decreasing imports/step towards self-sufficiency/no loss of foreign exchange
Increasing export (in good years)/increase foreign exchange **[3]**

(ii) State two natural inputs necessary for wheat production, and for each explain its importance.
Cool/moderate temperatures 10 – 20 - for germination and good growth/sowing
Warmer; 25 – 30 for ripening
Dry period - for ripening/harvesting
Moderate rainfall/moist/wet weather - for germination/growing/swelling the grain
Alluvial/loam/clay soil/fertile – for good growth
Well drained soil – for root growth/aeration
Flat land – for machinery and/or irrigation

N.B. only credit 'for good growth' once [2 marks for each input, float of 1] **[5]**

(iii) Explain how human inputs have contributed to the increase in wheat production.
Irrigation on Indus plains and semi-arid areas
Details of irrigation max 2
Fertiliser factories in (named town)
HYVs developed e.g. Maxi Pak, Shahkhan 95, Wadnak 95, Kohson 95
GM modifications
Plant protection programmes e.g. treated seeds, pesticide sprays, locust watch
Land reforms making larger fields/more economical units
Tractors and other modern machinery
Government loans
Support prices
Education/skills/colleges
Capital from investors/banks
Land reform
Named input + explanation required, max 2 each line for development **[6]**

(c) (i) What did the land reform laws aim to do?
Redistribute land more equally/more fairly/ceiling on land holdings
Take land away from large landowners/landlords and give it to the tenants/poor farmers/protect tenants from eviction **[1]**

(ii) What are the advantages of land consolidation?
Economic units
Use of machinery/modern methods
Easier to supervise
Better irrigation
Better opportunity for investment/easier to get loans

(d) How can education and training help a small-scale farmer to increase [illegible]?

Learn about modern methods e.g. seeds, machinery, pest control
Learn how to avoid crop failure
Improve literacy e.g. read about what other farmers are doing, where to sell to mak[illegible] most profit
Take loans – must be related to education or literacy
Credit any line up to 3 marks

[4]

4 (a) For each of the mines A and B

(i) Name the type of mine,
A – adit/drift **[1]**
B – shaft **[1]**

(ii) Explain why that is the type of mine there,
A – coal (seam) exposed on a slope/can dig tunnels along the seam **[1]**
B – coal (seam) underground / does not outcrop **[1]**

(iii) Describe the method of mining coal in the mine.

Adit mine
Horizontal shaft into hillside
Possibly several shafts at different levels
Pick and shovel/trepanner (only credit once)
Dynamite on seam (only credit once)
Buckets/trucks/trolleys/conveyor belt/donkeys to surface

Shaft mining
Main shaft (vertical or sloping)
Tunnels/side shafts along seams
Pick and shovel/trepanner *(only credit once)*
Dynamite on seam *(only credit once)*
Buckets/trucks /trolleys to main shaft
Lifted to surface/elevator [Res 2 for each type of mine, float of 1] **[5]**

Study the map Fig. 5 showing coalfields and coal mining centres in Pakistan.

(b) (i) Name the coalfield X and one of the mining centres there.
Quetta (coalfield) **[1]**
Sor Range, Degan, Mach, Khost, Shahrig, Harnai **[1]**

(ii) Name the coalfield Y and one of the mining centres there.
Lower Sindh (coalfield) **[1]**
Blakhra, Jhimpir, Sonda **[1]**

State the two main uses of coal mined in coalfield X
Brick making/brick kilns
(mixed with imported coal) For steel making/in the blast furnace

Briquetting **[2]**

(c) Explain why coal has to be imported.

Not good enough for iron smelting/no metallurgical coal/needed for Pakistan Steel
Need for coal to mix with poorer grade
Difficult to mine/seams thin/seams contorted

Not enough mined in Pakistan/lack of technology/lack of finance
[Credit any line up to 2]

[3]

(d) Hydro-electric power (HEP) is called a 'renewable' source of power.

(i) State three physical conditions necessary for the development of an HEP scheme.

Wet climate/moderate/high rainfall/over 750 mms
Water from glaciers/snowfields
Deep valley
Steep sided valley
Narrow valley
Impervious/impermeable rock
Large drainage basin/large river/large catchment area
Cool climate/low evaporation
Strong/hard rock
Reliable water supply **[3]**

(ii) Why is it important for Pakistan to develop renewable power sources?

Reserves of fossil fuels running out
Named pollution/not environmentally friendly/causes global warming/greenhouse gasses
More readily available
Schemes in remote areas/can be built away from fuel resources
Low running costs of HEP, solar power, wave energy etc./cheaper in the long term
Fossil fuels expensive
Fossil fuels are imported
Nuclear power dangerous **[4]**

5 (a) (i) Describe the distribution of air routes in Pakistan

Largest numbers/biggest foci from Karachi (10)
Centres/foci in other major cities e.g. Lahore, Multan, Turbat, Quetta, (Any 2 e)
More south-north/SW-NE/less east-west
Many routes follow Indus Plain
Branches up other valleys e.g. Peshawar-Chitral
None in extreme north,
Few/none in Chagai, SE Sindh/Thar **[4]**

(ii) Explain why there are more internal air routes from Islamabad than Dalbandin.

Islamabad **[Res. 2]**
Federal capital
Administration/business/tertiary industry
Larger population
More people can afford to travel/high standard of living
International airport
Access to Northern Areas
Better road links

Dalbandin **[Res.2]**
Poor road links
Lower population
Less administration/office jobs
Fewer people can afford to travel/low standard of living
No international airport
Desert/barren land 2 @ 2 **[4]**

(iii) Why is air transport and travel important within Pakistan?

Faster than road and rail
Better to reach remote places/places where roads are poor
Better in hilly/mountainous areas
Better for light, high value goods
Less chance of robbery/safer
More people can afford air fares
More demand from business
Can be used all year/not affected by snow, flood etc.
Tourism within Pakistan
Emergencies
Improved communication between cities **[3]**

(b) (i) Describe the features of Lahore Dry Port that can be seen in Photograph A

Lorries/trucks/containers/trailers
Sign to import examination area
Storage sheds/warehouses
Covered loading area/shelter with poles
Loading platform/raised area
More containers in background/behind sheds
Flat/hard/concrete ground
(2) men/drivers/labours
Forklift truck **[4]**

(ii) State two other features of a dry port that cannot be seen in the Ph

Export checks and clearance
Import examination area
Railway yard
Refrigeration facilities
Management offices/customs administration
Cranes/loading facilities
Large storage area
Security gate/guards **[2]**

(iii) Why are dry ports important to the economy of Pakistan?

Speeds up customs procedures/better collection of revenue/simplified administration
Saves time transporting goods to Karachi/hassle-free transport
Reduce workload at Karachi port/Port Qasim
Stimulate foreign trade (in cities far away from ports) **[3]**

[Credit up to 2 for any line]

(c) (i) Name an example of a craft industry

Carpet
Traditional textiles
Embroidery
Jewellery
Ceramics
Woodwork
Metalwork
Sports goods
Pottery
etc. **[1]**

(ii) In what ways is this type of industry important to the local economy?

Employment (in general)
Employment of women/the whole family
Meet demand of local market
Reduces rural-urban migration
Uses local raw materials
Uses waste materials
Low investment in technology/cheap to set up
Increases capital/earns money for the local community **[4]**